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SOLAR GRANTS GUIDE

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SOLAR GRANTS GUIDE



COMMONWEALTH OF MASSACHUSETTS

SOLAR ACTION OFFICE
ONE ASHBURTON PLACE, BOSTON, MA 02108
(617) 727-7297

SEPTEMBER, 1978

This guide was researched, written, and compiled by Vicki Smith.

ACKNOWLEDGEMENTS

Two major grants guides were extremely helpful in the preparation of this publication. Sources of Funding for Solar Activists, by Anita Gunn at the Center for Renewable Resources in Washington, D.C., is an excellent, detailed guide on the preparation of grant proposals, particularly for foundations. The Federal Granting System: A Guide for Local Government in Massachusetts, published by the Massachusetts Cooperative Extension Service at the University of Massachusetts at Amherst, is a very good guide for anyone interested in the federal grant process. (For further information on both of these publications, see the Bibliography.)

Within the Solar Action Office, many people have made significant contributions to this final version. Willy Osborn initiated the project and offered continual encouragement until its completion; Ann Wheeler made substantial editorial improvements; Pat Moriarty assisted in the editing; Martin Giuffrida, with some help from Paul de Koninck, designed the cover; Barbara Scheller assisted with both editing and typing; Diana DeSimone helped out with last minute revisions; and Jeff Brauer and Peter Thorne prepared specific sections. Special acknowledgement should also be given to Keith Halloran who prepared an initial draft of this guide which was not published. To all these people many thanks are due.



COMMONWEALTH OF MASSACHUSETTS

Executive Office of Consumer Affairs

Solar Action Office

Room 1413 One Ashburton Place Boston, Massachusetts 02108 617-727-7297

William C. Osborn
Director

September, 1978

This guide to solar grantsmanship has been prepared by the Massachusetts Solar Action Office to assist you in acquiring a better understanding of solar grant opportunities and to provide you with some information on preparing a successful solar grant application form.

The Solar Action Office, under the direction of the Executive Office of Consumer Affairs, is committed to accelerating the growth and development of solar energy in a manner that advances and protects the public interest in Massachusetts. Solar energy promises to contribute substantially toward our ultimate objective of enjoying stabilized energy supplies and prices, and it is estimated that thousands of new jobs can be created in Massachusetts in the manufacturing, distribution, installation, and servicing of commercial and residential solar equipment.

We hope that this guide will encourage individuals, community action organizations, local governments, and small businesses to pursue funding for solar projects. Each year, as other energy sources have become increasingly expensive and environmentally dangerous, more people have become committed to developing alternative, renewable energy sources. In 1974-1976, private foundations in this country awarded grants in excess of \$30 million for projects in environmental affairs, including solar energy. Since 1974 the federal government has allocated more than \$50 million for a wide variety of residential and commercial solar grant demonstration programs. Federal funding is steadily increasing for solar research and commercialization projects.

While this grants guide is by no means definitive, we hope that it will offer you some insights into the potential variety and vastness of funding available for solar projects.

THE SOLAR ACTION OFFICE AND GRANTS

This publication on solar grantsmanship is intended as a self-help guide. We, at the Solar Action Office, hope that it will provide you with all of the necessary information to pursue funding for your solar project. However, we want to stress that our office stands ready to assist you whenever necessary. For instance, if you have trouble cutting through bureaucratic red tape or if you're stuck at a particular phase of project development, please let us know, and we'll be glad to assist you.

Our office is also a solar resource center. We have a solar energy library containing information on a variety of solar issues, including past grant programs. We have also compiled several publications which might be of assistance in designing solar projects. For example, if you know very little about how solar energy actually works, you might be interested in visiting an on-site solar system. Our publication, entitled Major Massachusetts Solar Installations, contains information on most major solar installations in the state, where they are located, and whether you can visit them. In addition, our staff is always willing to offer basic technical advice.

You may also wish to contact manufacturers and distributors of solar energy equipment to see if any of them would be interested in donating solar equipment or services to your project in exchange for some public recognition. Another of our publications, A List of Massachusetts Solar Industries, contains information on all solar industries currently operating or located in the Commonwealth, and it might be of some assistance to you in such an endeavor. (For further information on these and other publications, see the Bibliography.)

The Solar Grants Guide will be revised periodically with the most current and accurate information available. We hope that you will let us know of any additional sources of funding or information which we have not mentioned.

Good luck with your solar projects!

Director
Massachusetts Solar Action Office

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INTRODUCTION

The purpose of this guide is to provide a method of approaching the subject of solar grantsmanship. The guide is oriented toward individuals, community organizations, small businesses, and local government, but should prove useful to anyone who is interested in seeking funding for solar projects.

Successful solar grantsmanship begins with thorough research and a well-developed understanding of potential funding sources. Because widespread interest in solar energy is fairly recent, information on funding sources is still somewhat scattered. There is often a great deal of confusion concerning both the overall availability of funds for solar projects and the eligibility of specific projects for certain funds. Thus, when seeking funds for a particular idea or project, it is of paramount importance to keep an open mind, be creative and flexible, and above all, consider all possible alternatives and combinations.

Much potential funding for solar energy projects is focused within the newly-created Department of Energy (DOE), formerly the Energy Research and Development Administration (ERDA). There are, however, several other sources, both inside and outside the federal government, that should not be overlooked. Some grant programs are specifically for solar energy, others can be applied to general energy projects, and still others can be used for a variety of purposes, such as neighborhood revitalization projects and job programs. Several private foundations fund energy projects, and the Small Business Administration has a special loan program. In addition, there are numerous other incentives and commercialization programs that should be fully investigated - either as alternatives to grant programs or as a means to increase other sources of funding.

Always keep in mind that there are many funding sources. In your search for funds, you should leave no stone unturned, nor should you arbitrarily dismiss any particular funding source. There is a substantial amount of funding for solar projects already available, and the amount of that funding is increasing every year. This guide was created to encourage you to write a specific proposal and to assist you in exploring the various types of solar funding available.

The first section of the guide, SUCCESSFUL SOLAR GRANTSMANSHIP, discusses what issues you should consider in designing a solar project and what type of information you should include in your proposal. The second section, GRANT INFORMATION SOURCES, details major centers and publications that have up-to-date information on solar grant and funding programs. The third section, SOURCES OF FUNDING, deals specifically with funding available in both the private and public sectors. Included is information on private foundations that are interested in solar energy

projects and material on federal agencies that administer solar grant and loan programs.

Although some degree of frustration and discouragement are usually involved in any major search for funds, we hope that this guide will help to make your search as organized, as pleasant, and as productive as possible.

SUCCESSFUL SOLAR GRANTSMANSHIP

A. DESIGNING YOUR PROJECT

Funding sources will be more interested in you the more they know about your specific project, personal qualifications, and financial need. Before you attempt to locate a specific funding source, there are several reasons why you should conceive and document your solar project in as much detail as possible.

1. If you initially have difficulty in finding an appropriate funding source, you may never fully finish designing your project.
2. Even if you locate a potential funding source, your initial impressions of grant regulations and procedures may prove to be overly discouraging, and may unnecessarily restrict your innovation and motivation.
3. Total reliance on a single pre-selected funding source may unnecessarily limit, and perhaps eliminate your options for more appropriate funding elsewhere.
4. It is much easier to amend and adapt an existing preliminary proposal to each organization's specific requirements than it is to write a completely new proposal for each new funding source.

B. WHAT TO INCLUDE IN YOUR PROPOSAL

While every energy funding source has its own guidelines for applications, there are some universal principles of grantsmanship that should be followed.

First, you should bear in mind at all times that you are going to have to sell both the project, as something worth funding, and yourself, as a person or organization capable of conducting the project. Grants are awarded on a competitive basis, and the more thought-out and planned your project and proposal are, the better your chances are for eventual success. Make your proposal as sound, technically and financially, as possible.

Second, in designing your project and presenting your proposal, you should clearly demonstrate the immediate and long term beneficial effects of your plan. These benefits should be consistent with the particular objectives of each funding source and should offer the promise of playing a significant role in advancing the ultimate goals of the funding agency. You may want to promote your project as a state or national "pilot program" with the potential of being repeated elsewhere.

In writing your proposal, there are several major issues which should be addressed. The following guidelines should be helpful in considering what type of information should be included in any written submission to a funding source - public or private.

1. Do your homework. Know what the objectives and interests of the specific funding agency are. How does your proposal further these particular goals? What other grant proposals to the same funding source have been successful?

2. State the purpose of your project. What do you want your project to accomplish? Why are you pursuing funding for this specific program?

3. Define the need for the project. You have to articulate the need for what you are doing as explicitly as possible, and then, demonstrate in detail how your project specifically meets that need.

4. State your capabilities. Why is your organization capable of undertaking the project? Obviously, no matter how good an idea might appear to be, potential funding sources want to know that the individual or organization undertaking the project is competent and fully capable of seeing the proposal through to a successful completion. What is your (or the other members' of your organization) background, education, and special area of expertise? What other project(s) have you, or your organization, initiated and successfully completed?

5. Present financial information as clearly as possible. Try to anticipate every possible expense in developing a budget for your proposal. How will you meet your expenses? What other sources of income do you already have or will you be pursuing? Keep in mind that many programs require cost-sharing.

6. Who do you represent? If you are part of an organization, who is your constituency, and who are you trying to serve through your project? Who will your proposal benefit, both directly and indirectly?

C. PROJECT ELIGIBILITY

Some solar grant programs are open to all interested parties, others are restricted to specific geographic areas, technologies, and ethnic or income groups. If you do not meet the eligibility requirements with your preliminary proposal, investigate the possibility of making arrangements with areas or groups who do qualify; try to work out a cooperative arrangement and ask them to apply for you.

GRANT INFORMATION SOURCES

A. SOURCES OF INFORMATION ON FEDERAL PROGRAMS

Keeping up-to-date on grant information is particularly important since it changes continually. The federal government has two major sources of information on general funding. All federal programs for individuals, state and local governments, community organizations, and businesses are listed in the Catalog of Federal Domestic Assistance. This very large catalog is available at most college and business libraries as well as the Federal Depository Libraries listed in the Appendix. Individual subscription rates are available for \$18.00 per year. This also entitles you to a loose-leaf notebook cover as well as periodic funding updates. Contact:

Catalog of Domestic Assistance
Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402
(202)783-3228

Federal law also requires that federal grant opportunities and contract solicitations be published periodically in the Commerce Business Daily. This U.S. Department of Commerce publication provides a daily list of procurement invitations, contract awards, subcontracting leads, sales of surplus property, and foreign business opportunities for all federal agencies. The daily list offers the most immediate information concerning specific funding opportunities. Daily review of this publication for solar grant programs is most productive. It should be reviewed no less than once a week. Specific leads should be followed up quickly to comply with deadline dates. This publication should also be available at all business libraries as well as in the Federal Depository Libraries listed. Individual subscriptions are available for \$80.00 per year.

Commerce Business Daily
Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402
(202)783-3228

(Payment must accompany order.)

While the Catalog of Domestic Assistance is an excellent resource for any potential grantee, it is often difficult to quickly find all of the programs for which one might be eligible to receive assistance. Therefore, the United States Department of Agriculture has computerized the index of the Catalog to facilitate obtaining information on all programs which might pertain to local government. This service, which is known as FARPS (Federal Assistance Programs Retrieval System), is available to the general public in New England through the Cooperative Extension Service. Further information can be obtained from your county Cooperative Extension Service or from:

Mr. George McDowell
Extension Economist
University of Massachusetts
312 Draper Hall
Amherst, MA 01003
(413) 545-2496

B. FOLLOWING THE TREND OF SOLAR FUNDING

It is important when reading both federal and private sector publications on solar grants to not only see what kinds of programs are currently available, but to also try to find some type of pattern. A project is apt to be most successful if it coincides with current and future trends, as opposed to past trends. If a project very similar to yours has already received substantial assistance, particularly if it was unsuccessful, the chances of your being funded for the same purpose are obviously minimized. This is especially true of unsolicited proposals.

Many federal agencies and private foundations, while addressing specific issues within their authority, are funding programs with a solar flair. For example, the Community Services Administration might be interested in funding a program to train solar installers in order to create new jobs in areas of high unemployment. New programs generally reflect the mood of the funding source, whether they are interested in residential demonstration projects, passive solar design, community action programs, or whatever. Try to ascertain what the current mood is at the funding source and anticipate future trends when planning your project.

Overall, if any funding trend is developing on the federal level, it seems to be in the area of small scale appropriate technology. Recently, much attention has also been focused on the potential value of passive solar design. Since both of these areas have remained relatively unexplored or "unfunded" by the federal government in the past, we expect funding for these two applications to increase in the future.

C. INFORMATION CENTERS

The Solar Action Office will be pleased to assist you in obtaining a variety of information on solar energy grant programs.

The National Solar Heating & Cooling Information Center was established by the Department of Housing and Urban Development (HUD), in conjunction with the Department of Energy (DOE), to help make everyone aware of the feasibility of solar energy and to encourage industrial, residential and business sectors to consider solar energy applications. HUD and DOE are sponsoring nationwide solar demonstration projects. Information concerning the specifics on the availability of and eligibility for grants can be obtained by contacting the Center:

National Solar Heating & Cooling Information Center
P.O. Box 1607
Rockville, MD 20850
1-800-523-2929

The Solar Energy Institute of America was established in 1976 to serve as an information dissemination service as well as a catalyst for solar energy development and demonstration. This membership organization provides free information about opportunities for funding in both the public and private sectors. A \$15 membership fee for individuals, \$25 fee for professionals, or \$45 fee for firms provides a monthly newsletter and a solar products and service catalog, as well as periodic solar information updates. For membership and general information, call or write:

Solar Energy Institute of America
1110 Sixth Street N.W.
Washington, DC 20001
(202)667-6611

The Solar Energy Research Institute was established and funded by the Department of Energy in July of 1977 to facilitate solar energy growth. It is the national focus and center of ongoing technological studies in the solar field. While the Institute is not yet publishing a newsletter on solar grants, such a publication may appear early in 1979. For further information on SERI's activities and grant potential contact:

Solar Energy Research Institute
1536 Cole Boulevard
Golden, CO 80401
(303)234-7380

The Department of Energy is currently funding four regional solar energy commercialization centers to accelerate the commercialization of solar energy applications and products. The Northeast commercialization center is the Northeast Solar Energy Center; it is run by the private, non-profit Northern Energy Corporation. NESEC is located in Cambridge, Massachusetts and has representatives in each of its member states. The NESEC staff has considerable technical expertise with all renewable energy resources. They can provide assistance on subjects as diverse as wood stove design, solar greenhouse construction, and macroeconomic energy modeling. They are also willing to help individuals and organizations prepare grant proposals. Although most of NESEC's funding is committed to specific projects, they do fund some unsolicited proposals (see Sources of Funding). For further information contact:

Stanley Rosenfield, Contracts Manager
 Northeast Solar Energy Center
 70 Memorial Drive
 Cambridge, MA 02142
 (617)661-3500

D. PERIODICALS WHICH INCLUDE SOLAR GRANT INFORMATION

Solar Energy Research and Development Report

The Division of Solar Energy at DOE publishes a monthly news report available to all at no cost. The report highlights current solar activities, contract opportunities, availability of technical information, and major solar achievements. To obtain this report, contact:

Department of Energy
 Division of Solar Technology
 Attention: Solar Energy Information Request
 Washington, DC 20545
 (202) 376-4000

Department of Energy Weekly Announcements

Those interested in following program developments within the DOE Division of Solar Technology are advised to have their names placed on the mailing list of the DOE Weekly Announcements, a collection of news releases issued each week. These releases include information on major new procurements, new program policies, and research and development opportunities. To have your name placed on the mailing list, please write or call:

Office of Public Affairs
 Department of Energy
 Washington, DC 20461
 (212) 566-7834

Solar Engineering Magazine

This monthly magazine is the official publication of the Solar Energy Industries Association and provides a great deal of technical information on solar systems. Subscription rates: \$15 for 12 issues; \$1.50 for single copies.

Solar Engineering Publishers, Inc.
8435 Stemmons Freeway
Suite 800
Dallas, TX 75247
(214)630-6963

Solar Age

This is the official magazine of the American Section of the International Solar Energy Society. It presents wide-ranging articles on various aspects of solar energy and is published monthly. Subscription rates: \$20 for 1 year; \$32 for 2 years; \$40 for 3 years.

Solar Vision, Inc.
P.O. Box 4934
Manchester, NH 03108
(603)827-3347

The Solar Energy Intelligence Report

This weekly newsletter presents up-to-the-minute information on what is happening in solar energy at the Department of Energy, in Congress and in the states. It provides information on the private sector, as well as the public, and includes the latest on grant programs. Subscription rates: \$162 for 2 years; \$90 for 1 year; \$50 for 6 months. (All rates are expected to increase in September 1978.)

Business Publishers, Inc.
P.O. Box 1067
Blair Station
Silver Springs, MD 20910
(301)587-6300

Sun Times

This monthly newsletter is published by the successors of Solar Action, the group which organized Sun Day 1978. It has information on federal solar legislation and updates material on grant programs. Subscription rate: \$15 for 1 year.

Solar Lobby
1028 Connecticut Avenue N.W.
Suite 1100
Washington, DC 20036
(202)466-6880

People and Energy

This monthly magazine's major focus is on how alternative energy sources can be, and are being, used by community action groups to benefit low-income communities. Subscription rates: \$16 per year for institutions; \$10 per year for individuals and non-profit organizations; \$7 per year for low-income persons.

Citizens' Energy Lobby
1413 K Street N.W.
8th Floor
Washington, DC 20005
(202) 393-6700

New Roots

This newsletter chronicles and attempts to foster the growth of technology self-determination by encouraging and coordinating appropriate technology activities. It is published every other month. Subscription rates: \$8 for six issues; \$6 for six issues if you earn less than \$5,000/year; \$12 for six issues for institutions.

c/o Energy Office
University of Massachusetts
Amherst, MA 01003
(413) 545-0926

Rain

This journal presents information for people interested in appropriate technology aimed at increasing local self-reliance and decreasing dependence on limited resources. Subscription rates: \$10 for ten issues; \$5 for ten issues if you earn less than \$5,000/year.

Rain Magazine
2270 N.W. Irving
Portland, OR 97210
(503) 227-5110

Grants Newsletter

This newsletter is published bi-monthly and assists and advises people on low cost, resource conserving alternatives in the areas of waste treatment, energy supply, food production, and other related issues. Subscription rates: \$15/year.

Office of Appropriate Technology
State of California
1530 Tenth Street
Sacramento, CA 95814
(916) 445-1803

SOURCES OF FUNDING

A. FOUNDATIONS

1. Learning about Foundations

Private foundations are becoming increasingly interested in energy-related projects and should be fully explored as a means of funding. Generally, foundation grants are made to organizations rather than to individuals. In addition, each foundation has different goals and different criteria concerning grants. Before approaching any foundation about a specific project, it is best to know as much about the foundation as possible. What are its purposes and objectives? What amount of assistance is usually given? Have organizations similar to yours received assistance in the past? Below is a fairly comprehensive bibliography and guide to information on foundations that should be helpful in your endeavor.

The Foundation Directory

Published annually, this directory is the most complete source of information on foundations, listing their names, officers, fields of interest, income and grant allocations. The cost of the directory is \$36.

Columbia University Press
136 South Broadway
Irvington-on-Hudson, NY 10533
(212)975-1120

The Foundation Center

This center has over thirty branch libraries throughout the nation.

100 Connecticut Avenue N.W.
Washington, DC 20036
(202)331-1400

Regional Reference Collections in Massachusetts:

Associated Foundation of Greater Boston
294 Washington Street, Suite 501
Boston, MA 02108
(617)426-2606; and

The Boston Public Library
Copley Square
Boston, MA 02117
(617)536-5400

The Foundation News

Published bi-monthly, it has current funding information on foundations. The cost is \$20 for six issues.

Council on Foundations
P.O. Box 768, Old Chelsea Station
New York, NY 10011
(212)489-7120

The Foundation Reporter

This is a guide to philanthropic organizations and their activities. The cost is \$120 for a single volume which is published annually.

Taft Information System
Taft Products
Suite 600
1000 Vermont Avenue N.W.
Washington, DC 20005
(202)347-0788

Giving USA

This is an annual publication. Also published monthly is a bulletin reporting on selected recent grants. The cost for this book and monthly updates is \$25 per year.

The American Association of Fund Raising Counsel, Inc.
500 Fifth Avenue
New York, NY 10011
(212)354-5799

How to Write Successful Foundation Presentations

Written by Joseph Dermer, this publication provides useful, practical information on proposal presentation and costs \$8.95.

Public Service Materials Center
104 East 40th Street
New York, NY 10016
(212)687-0646

The Grantsmanship Center News

This is a bi-monthly magazine and contains articles on both private and public funding sources. Six issues are published each year. The annual subscription rate is \$15.

Grantsmanship Center
1031 South Grand Street
Los Angeles, CA 90044
(213)485-9094

2. Foundations Likely to Fund Solar Projects

The following foundations, although the list is by no means complete, are likely to be interested in funding solar energy projects.

National Foundations:Ford Foundation

Solar energy projects have traditionally been sponsored by the Ford Foundation.

Contact: Howard Dressner
320 East 43rd Street
New York, NY 10017
(212)573-5000

General Services Foundation

The foundation prefers to contribute to projects which are experimental, demonstration, or research-oriented.

c/o James P. Shannon
400 Forshay Tower
Minneapolis, MN 55402
(612)339-7343

McIntosh Foundation

This foundation strongly supports environmental rights litigation.

Contact: Michael McIntosh
170 Okeechobee Boulevard
West Palm Beach, FL 33401
(305)659-6006

Mellon Foundation

This foundation selectively funds certain projects in environmental affairs areas.

Contact: J. Kellum Smith, Jr., Vice-President
140 East 62nd Street
New York, NY 10021
(212) 838-8400

Charles Stewart Mott Foundation

This foundation is extremely interested in community action and education.

Contact: Homer Dowdy
500 Mott Foundation Building
Flint, MI 48502
(313) 238-5651

Orleton Trust Fund

This trust is primarily interested in innovative approaches to alternative energy systems, alternative farming methods, and recycling technologies on the local, national and international levels.

c/o Mrs. Jean Weaver
1777 Borel Place, Suite 306
San Mateo, CA 34402
(415) 345-2818

Resources for the Future

This center is interested in advancing the development, conservation, and use of natural resources through programs of research and education.

Contact: John E. Herbert, Secretary
1755 Massachusetts Avenue N.W.
Washington, DC 20036
(202) 462-4400

Rockefeller Brothers FundThe Rockefeller Foundation

Environmental concerns are among the major interests of both the fund and the foundation.

Contact: Michaela Walsh
30 Rockefeller Plaza
New York, NY 10020
(212) 247-8135

Contact: Lawrence Stifal
111 West 50th Street
New York, NY 10020
(212) 869-8500

Shalan Foundation

This foundation supports projects for organized action on energy issues.

Contact: Drummond Pike
2749 Hyde Street
San Francisco, CA 94109
(415) 673-8660

The Sierra Club Foundation

The Sierra Club is particularly interested in conservation.

530 Bush Street
San Francisco, CA 94108
(415) 981-6479

Local Foundations:

Haymarket Foundation

The foundation is interested in community organizing aimed at assisting low-income and working class persons in the New England area.

2 Holyoke Street
Cambridge, MA 02138
(617) 661-8558

Henry P. Kendall Foundation

The foundation is primarily interested in environmental matters and funds projects in this area.

Contact: Robert Allen
One Boston Place
Boston, MA 02108
(617) 723-8728

Levison Foundation

This organization is particularly interested in nuclear policy and alternative economics.

Contact: Sydney Shapiro
95 State Street
Springfield, MA 01103
(413) 737-1441

B. THE FEDERAL GOVERNMENT1. Department of Energy and Department of Housing and Urban Development

The United States Department of Energy (DOE) has numerous grant programs which fall into two major categories: solicited and unsolicited. Solicited proposals are those for which DOE specifically defines and then contracts out. Unsolicited proposals are those proposals or inventions for which DOE is not currently advertising or seeking bids on.

Solicited Proposals

DOE funds are frequently available for various solar energy projects on a competitive basis. Formal, written solicitations or requests are issued by DOE, or occasionally, by other federal agencies designated by DOE to carry out certain portions of solar programs. To reply to these invitations, prospective contractors submit proposals for specific tasks by certain deadlines. Those who satisfy DOE's requirements then compete for the grant award by bidding for the task.

All solar procurement invitations are publicized in advance in the Commerce Business Daily. The Commerce Business Daily is published daily by the U.S. Department of Commerce. (See page 5.) Procurement announcements are also published in many professional, technical, and trade publications.

The Division of Solar Technology at DOE uses the following methods to solicit proposals:

A Request for Proposal (RFP) is the formal means of soliciting proposals. It includes information on the specific scope of work to be contracted out, terms and conditions of the contract, and instructions for preparation of the proposal. Request for Proposals, or RFP's, explain how proposals will be evaluated. RFP's are almost always competitive, meaning that those who submit proposals compete with others for the same work; all proposals must be received by a certain deadline. RFP's are issued periodically throughout the fiscal year. Information on obtaining specific RFP's can also be found in the Commerce Business Daily.

A Program Opportunity Notice (PON) is used for projects which demonstrate the technical feasibility, environmental acceptability, and economic potential of energy technologies. Demonstrations can be either for a pilot project or for full-scale operation. The PON, issued by DOE, seeks proposals from builders, developers, state and local governments, corporations, educational institutions, and others proposing solar energy projects.

Each PON provides eligibility information on the specific type of solar energy system, the technical requirements of that system, the types of organizations and individuals able to participate, and the participants' required level of expertise. Notices contain detailed instructions on the preparation of proposals. Generally, the initial reply to a PON should contain the following:

- 1) a project summary,
- 2) a technical proposal, and
- 3) a business proposal.

Each proposed demonstration project should also include the necessary information about the planned or existing building, land, financing, necessary approvals, and technically acceptable solar energy system. All material submitted should be as brief and concise as possible.

Requests for Grant Applications (RFGA) are solicited by the Department of Housing and Urban Development (HUD) for the residential portion of the National Heating and Cooling Demonstration Program. The RFGA seeks grant applications from builders, developers, and solar system manufacturers who propose integrated demonstration projects. The demonstration project should combine an active solar energy system and building design or a passive system which integrates the building structure as part of the plan.

RFGA project applications are solicited in 9-month cycles; they are announced through solar and construction publications and through HUD's mailing list. Proposals in response to a specific RFGA should generally contain information on:

- 1) the technical aspects of the proposed solar energy system,
- 2) information on the state of project development, and
- 3) a discussion of why the proposal should be funded.

Details are included in each RFGA.

Unsolicited Proposals

The Division of Solar Technology (SOLAR), at the Department of Energy, recognizes that unsolicited proposals are useful in developing solar technology. An unsolicited proposal is usually prepared in the hope that DOE will fund the potential grantee to develop or provide the

services described in the proposal.

However, because the preparation of any unsolicited proposal requires a substantial investment of time and effort, those interested in presenting a proposal should make initial inquiries into SOLAR's requirements before committing themselves to an expensive and involved project. To justify their funding, unsolicited proposals should not closely resemble other current competitive solicitations or be too similar to ongoing projects.

(For information on these projects see Solicited Proposals.)

In order to be seriously considered, unsolicited proposals should offer the potential for substantial cost savings or improved performance. Additional information on proposal preparation may be found in the following publications.

Guide for the Submission of Research and Development Proposals by Individuals and Organizations, available at no cost from DOE, Division of Procurement, Washington, DC 20545.

Guide for the Submission of Research Proposals from Educational Institutions, available at no cost from DOE, Office of University Programs, Washington, DC 20545.

Guide for the Preparation of Proposals for Special Projects in Energy Education and Training, available at no cost from DOE, Office of Public Affairs, Educational Programs Branch, Washington, DC 20545.

Procurement regulations, containing additional information concerning contracting policy and procedures, are available at nominal cost from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, (202) 783-3220.

2. Health Care Facility Solar Program

The Department of Health, Education, and Welfare (HEW), in conjunction with the Department of Energy, is initiating a solar demonstration program for health care facilities. The major emphasis of the program will be solar heating and domestic hot water. A total of \$2 million will be divided equally among twelve regions. Each different geographic region will focus on a specific solar application. Long term health care facilities, small hospitals, large hospitals, hospital laundries, and clinics which fulfill requirements within their regions are eligible to participate.

The program will be conducted on a cost-sharing basis; about 75% of costs will be provided by HEW. Details of the program should be announced in October 1978. Those interested in applying will have 90 days to submit the appropriate application forms. For further

information on this program, check the Commerce Business Daily, contact the Solar Action Office, or write:

Mr. McGhee Mantooth
Health Resources Administration
Energy Action Staff
Room 10-20 Center Building
3700 East-West Highway
Hyattsville, MD 20763
(301)436-7263

3. Solar Heating and Cooling of Buildings Demonstration Program

Residential Demonstration Program

The Department of Housing and Urban Development (HUD), in conjunction with the Department of Energy (DOE), runs a program to demonstrate the technical and economic feasibility of solar heating and cooling in buildings. The program consists of a series of five "cycles" of demonstration projects at intervals of nine months to a year. Four cycles have already been completed. The fifth cycle is expected to start before the end of 1978.

Each cycle begins with a Program Opportunity Notice (PON) soliciting proposals from organizations who wish to participate in the program. Contracts are awarded on a competitive basis according to:

- 1) the technical merit of the program,
- 2) the uniqueness of the program in terms of geographic location, building type, and local climate conditions, and
- 3) the amount of energy produced per dollar of cost.

Requests for grant applications should be directed to:

RFGA/Integrated Projects
Solar Demonstration Program
Room 8158
Department of Housing and Urban Development
Washington, DC 20410

Additional information on the program can be obtained by calling the National Solar Heating and Cooling Demonstration Center, at 1-800-523-2929.

Contracts in this program cover the overcost of purchasing and installing the solar system, that is, the difference in cost between the solar system and a conventional system. Cycle 4A ended in August 1978. During Cycle 3, 707 applications were received, 200 selected, and 169 funded.

Some examples of successful proposals in Massachusetts follow:

During Cycle 2, the Executive Office of Community Development in Northampton, Massachusetts built a single family home as a cooperative handicapped residence. The home uses active heating and domestic hot water systems. During Cycle 3, in the summer of 1977, eight separate projects using active solar systems were funded in Massachusetts; these included a communal (5 car) garage in Marion that supplied solar heating and hot water for 5 single family detached homes, a private home in Brewster, and a solar heated community development project in North Easton containing 69 units of elderly housing. For further information on these and other Massachusetts projects funded during Cycles 2 and 3, contact the Solar Action Office.

Commercial Demonstration Program

The Department of Energy, in addition to its residential demonstration program administered jointly with HUD, is also running a program to illustrate the feasibility of solar heating and cooling in commercial buildings. Since similar technologies are involved and since the same research and development benefit both applications, the two programs are being administered in much the same way. The DOE program is also being carried out in cycles to maximize the benefits from continuing advances in solar technology. Three cycles of a current four-cycle program have already been completed. Announcement of the fourth cycle is expected late in November 1978.

Each cycle begins with a Program Opportunity Notice (PON) soliciting proposals from organizations who wish to participate in the program. Contracts are awarded on a competitive basis according to:

- 1) the technical merit of the program,
- 2) the uniqueness of the program in terms of geographic location, building type and local climate conditions, and
- 3) the amount of energy produced per dollar of cost.

Requests for grant applications should be directed to:

Mr. Carl Conner
U.S. Department of Energy
Operations, Division of Procurement
400 First Street, N.W. P.R. 541
Washington, DC 20545
(202) 376-9623

As in the residential program, awards for commercial demonstration are made on a revenue-sharing basis. In Cycle 3, DOE provided between 37-80% of the total cost, or an average of 60%.

Some examples of successful proposals in Massachusetts are:

During Cycle 1, the Grover Cleveland School of Dorchester, received DOE funds to retrofit part of its physical plant with a solar space heating system. Hampshire College in Amherst was funded to install a solar heating and cooling domestic hot water system on a complex of buildings now under construction. At least seven projects were funded in the Commonwealth during the first two cycle programs. For further information contact the Solar Action Office.

4. Appropriate Energy Technologies Grant Program

The Department of Energy has been conducting an Appropriate Energy Technologies Grant Program. The program is referred to as Appropriate Technology, because the energy technologies used are "appropriate" to local needs and skills. DOE has allocated \$3 million to this grant program for the Fiscal Year 1978; \$7 million will probably be allocated for Fiscal Year 1979.

The program is designed to assist individuals, local non-profit organizations and institutions, state and local agencies, Indian tribes, and small businesses. DOE is searching for projects which:

- 1) make the best use of available, renewable energy sources,
- 2) conserve non-renewable energy resources,
- 3) depend largely on human labor, and
- 4) maximize the use of local materials and skills.

Inventions should be efficient, should emphasize decentralized technology, and should be simple to install, operate and maintain. Proposals should also be designed to satisfy local needs, increase community awareness and understanding, and be environmentally sound.

Three major types of projects will be funded:

- 1) Idea development demonstrates the potential of a specific concept. Grants of up to \$10,000 will be made for proposals that demonstrate the value of a specific idea which needs further development.
- 2) Concept-testing grants will be awarded for projects which have gone beyond the development phase and are ready for testing. Awards of up to \$50,000 will be made in this category.
- 3) Demonstration funding will be available for the development of technologies which have been tested but still need to be proven in actual use. Funds of up to \$50,000 will be awarded.

In a pilot project conducted in the San Francisco area, approximately 40% of the grants went to solar devices, 50% for conservation devices, and the remaining 10% for wind and other systems.

For further information contact:

Ms. Anne Hagenauer
Appropriate Energy Technologies Program
Department of Energy
20 Massachusetts Avenue N.W.
Washington, DC 20545
(202) 376-4711

or

R.V. Giagrande
Chief Technology Sharing Office
DOT/Transportation Systems Center
Kendall Square
Cambridge, MA 02142
(617) 494-2486

5. NCAT Appropriate Technologies Grant Program

The National Center for Appropriate Technology (NCAT) has become the official funding arm of the Community Services Administration for solar and alternative energy projects. NCAT was established to provide technical and financial assistance to low-income technology projects.

NCAT is currently soliciting proposals for a broad range of projects dealing with small-scale energy technologies for low-income areas. Most grants are less than \$10,000, although a few exceed that amount.

Last year several projects were funded in Massachusetts. One such project was a Conceptual Review of the Field of Appropriate Technology, conducted by the Center for Community Economic Development in Cambridge, Massachusetts. The Center received \$8,062 to undertake a national study, including research focusing on the relationship between appropriate technology and economic development. The Boston Urban Gardeners, Inc. received a \$1,500 grant to assist them in their work on toxicity in urban food gardens. Of NCAT's \$3 million budget, \$1 million is allocated for grants which support everything from newsletters to solar collectors. NCAT is also an excellent resource center for information on appropriate technology.

For further information contact:

The National Center for Appropriate Technology
P.O. Box 3838
Butte, MT 59701
(406)723-5474

or

Mr. Robert Shortreed
84 Westford Road
Stafford Springs, CT 06076
(203)429-0160

Mr. Shortreed is the regional representative for the New England area.

6. Department of Agriculture

The Department of Agriculture has a major interest in solar energy projects as they relate to agriculture. A program summary of current projects entitled Solar Energy for Agriculture and Industrial Process Heat (ERDA 77-72 June 1977), stock number 060-000-00079-4, costs \$2.30 and can be obtained from:

Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402
(202)783-3220

Solar Agriculture and Food Processing

The Department of Agriculture, through an inter-agency agreement with the Department of Energy, is conducting and managing research on agricultural applications of solar energy. Research projects which are administered by the Agricultural Research Service (ARS), focus on five major areas:

- 1) solar grain drying,
- 2) solar drying of peanuts, tobacco, and forages,
- 3) solar energy for livestock production,
- 4) solar heating of greenhouses and rural residences,
- 5) solar energy in food processing.

Principal investigators from ARS solicit proposals, appoint panels to evaluate proposals, serve as contracting officers, and hold workshops.

Although a majority of the projects are conducted by state agricultural experiment stations, ARS, university laboratories, and private industry, any interested person can submit unsolicited proposals or

inquiries. For further information contact the project coordinators:

Department of Agriculture

Dr. Landy B. Altman
ARS Energy Research Coordinator
ARS-USDA, Room 219, North Building
Agricultural Research Center-West
Beltsville, MD 20706

or

Department of Energy

Mr. James Dollard, Chief
Agricultural and Industrial Process Heat Branch
Department of Energy
Office of Solar Applications
20 Massachusetts Avenue N.W.
Washington, DC 20545

The principal investigators and closing dates are as follows:

1) Solar Heating of Greenhouses and Rural Residences - deadline is yearly at the end of October. Contact:

Louis D. Albright
Department of Agricultural Engineering
Cornell University
Ithaca, NY 14858

2) Solar Energy for Livestock Production - deadline is December 1, 1978. Contact:

J.P. Mason
Department of Agricultural Engineering
Virginia Polytechnic Institute and
State University
Blacksburg, VA 24061

3) Solar Grain Drying - deadline is March 15, 1979. Contact:

J.G. Hartsock, USDA, ARS, NCR
2700 Kent Avenue
West Lafayette, IN 47906

4) Solar Energy in Food Processing - April 15, 1979. Contact:

Dr. R.E. Berry, Laboratory Director
U.S. Citrus and Subtropical Products Laboratory
6000 Avenue South N.W. - Box 1909
Winter Haven, FL 33880

7. Comprehensive Employment and Training Act (CETA)

Under the provisions of CETA, the U.S. Employment and Training Administration (ETA), within the Department of Labor, offers a variety of programs aimed at improving the quantity and quality of employment opportunities. Programs range from research and development of employment projects to upgrading public service employment. At least one regional CETA project is in progress which supports community development of solar energy. In Cranston, Rhode Island, money from CETA, in addition to grants from the New England Regional Commission and the Community Services Administration, supports a training program to teach people to build and install solar hot water heaters. Program graduates become part of small businesses installing solar heaters in the community. The Community Action Administration (CAA), which administers this project, also established a loan program to aid low-income people to purchase solar water heaters.

The Rhode Island Project is being administered by the Cranston Community Action Program Committee, Inc. For further information on this specific program, contact:

Daniel S. Waintroob
Cranston Community Action Program Committee, Inc.
Director of Housing and Energy
30 Rolfe Street
Cranston, RI 02910
(401)467-9610

For more general information on opportunities, contact the Employment and Training Administration and inquire about CETA programs in your area.

Employment and Training Administration
Department of Labor
200 Constitution Avenue N.W.
Washington, DC 20230
(202)376-6270

ETA has also funded a national resource center in Washington, DC. The Center for Community Change is located at 1000 Wisconsin Avenue N.W., Washington, DC 20007, (202)337-6310. This organization's primary purpose is to encourage community organizations to participate in CETA-funded programs.

8. National Science Foundation

While the National Science Foundation (NSF) has no programs that are specifically oriented toward solar projects, they will be conducting a series of public forums in the fall of 1978 to obtain public information on the future role of the NSF and appropriate technology.

A major program which NSF is currently engaged in that might serve as a solar grants source is the Science for Citizens program. Grant programs also exist for other scientific projects which involve research and employ people with highly proficient technical backgrounds. For more information write:

National Science Foundation
Office of Science and Society
Washington, DC 20550
(202)655-4000

9. Community Development Block Grant Program

The Community Development Block Grant Program is administered through the Department of Housing and Urban Development (HUD). Only available to local governments, it provides money for a wide variety of community projects. Because local governments have a fair amount of discretion in the use of these funds, it might be possible to use some grant money for energy projects such as retrofitting and conservation efforts. Information on applying for discretionary funds may be obtained at HUD area offices or from the Washington office.

Community Planning and Development Office
Department of Housing and Urban Development
451 7th Street S.W.
Washington, DC 20410
(202)755-5111

The telephone number for the Boston office is 223-4114. For the local telephone in your region, see:

U.S. Government, Housing and Urban Development in your local telephone directory.

10. Federal Loan Programs

Small Business Administration Loan Program

Public Law 95-315, enacted in July of 1978, created a solar energy and conservation program within the Small Business Administration (SBA). The Act authorizes both direct and guaranteed loans to certain small businesses. The loans are designed to fund plant construction, conversion, expansion, and start-ups. Loans are limited to those businesses which design, manufacture, distribute, market, or install renewable energy or energy conservation measures, and to those firms which provide architectural, engineering, or consulting services necessary for the appropriate use of renewable energy sources or energy conservation methods.

Solar applications which would qualify for the loans are: active solar systems, passive solar design, photovoltaic cells, energy con-

servation products, hydroelectric equipment, wind energy, and biomass (including wood heating). Architectural, consulting, or engineering services which are necessary would also qualify.

The ceiling for guaranteed loans is \$500,000; for direct loans, it is \$350,000. Not more than 90% of a loan will be guaranteed. Congress has authorized \$45 million for guaranteed loans and \$30 million for direct loans.

Applicants are required to seek funding from non-federal sources first, and must apply for a guaranteed loan before requesting a direct loan. SBA regulations concerning the program should be issued soon, no later than December 1978. Grants for seminars by private groups for the purpose of training small business personnel to install energy conservation and solar energy equipment are expected to be made available.

Further information may be obtained from the Small Business Administration. Write or call the nearest SBA office listed in your phone directory under U.S. Government, or

Small Business Administration
1441 L Street N.W.
Washington, DC 20416
(202)655-4000

Federal Home Improvement Loans

Some homeowners might be eligible for government guaranteed loans for the purpose of purchasing and installing solar heating and hot water units under the Federal Housing Administration Insured Home Improvement Loan Program. Regional offices have guidelines concerning system acceptability. FHA's enthusiasm varies regionally. For further information contact the Federal Housing Administration in your region, or:

Federal Housing Administration
451 7th Street S.W.
Washington, DC 20410
(202)223-4131

C. STATE GOVERNMENT

1. Loan Programs in Massachusetts

Massachusetts Community Development Finance Corporation

This financing organization will provide venture capital to businesses in areas that have been declared economically depressed or blighted. Investments are made through either the local Community Development Corporation or through the Small Business Investment Corporation. Any company with a sound business plan that has been unable

to receive funding through normal channels and operates in an economically depressed area is eligible for aid. For further information contact:

Massachusetts Department of Commerce and Development
100 Cambridge Street
Boston, MA 02108
(617) 727-3330

Massachusetts Business Development Corporation

This private corporation is authorized to make loans to businesses in Massachusetts for any legitimate purpose. Many successful applicants have been refused financing by commercial lending institutions. For further information contact:

Massachusetts Business Development Corporation
One Boston Place
Boston, MA 02108
(617) 723-7515

Massachusetts Capital Resource Company

This organization was established and funded by domestic life insurance companies to provide new sources of capital in order to promote investment expansion and job growth in the Commonwealth. Each investment must:

- 1) be made to businesses which attempted, but were unable to obtain comparable financing elsewhere, and
- 2) be used for purposes which increase or maintain equal employment within Massachusetts.

For further information on eligibility requirements, contact:

Massachusetts Capital Resource Company
11 Beacon Street
Boston, MA 02108
(617) 367-3960

Massachusetts Technology Development Corporation

This publicly chartered organization provides management assistance and high risk start-up capital to launch innovative small companies whose products or processes include a significant amount of technology. The investment program will be implemented in 1979 with a federal Economic Development Administration grant establishing a \$2 million revolving loan fund. For further information contact:

Massachusetts Technology Development Corporation
 10 Lakeside Office Park
 Wakefield, MA 01880
 (617) 246-1250

2. Solar Action Office: HUD Hot Water Initiative

Massachusetts is currently participating with 10 other states in the HUD Residential Hot Water Initiative. Grants of \$400 each will be awarded to 1,375 Massachusetts homeowners for the purchase and installation of solar domestic hot water systems which supply 50% or more of the hot water requirements of an average family of four. These grants are available for homeowners, builders, developers, and others involved in the construction and retrofitting of residential structures. The program is expected to run through September 1979. For further information on eligibility and details, please contact:

Jeff Brauer
 Solar Action Office
 One Ashburton Place
 Room 1413
 Boston, MA 02108
 (617) 727-7297

3. Massachusetts Energy Office

The Massachusetts Energy Office occasionally funds projects. The office is currently funding a Pilot Urban Conservation Program to document the particular conservation problems of city dwellers. The office also has a toll-free energy phone to provide information to people with energy-related questions. The number is 1-800-922-8265.

4. Department of Community Affairs

The Division of Solar and Economic Opportunity, within the Department of Community Affairs, has several ongoing grant programs focusing on weatherization, crisis intervention, and consumer education for community action groups and low-income people. For further information contact:

Dolores DaLomba
 Division of Social and Economic Opportunity
 Department of Community Affairs
 10 Tremont Street - Room 64
 Boston, MA 02108
 (617) 727-7004

APPENDIX A

Sample Initial Inquiry

Your Address

Date

Name

Organization

Address

Dear _____:

I would like to explore the possibility of submitting a proposal in the area of _____. I am in the process of developing (information on project).

Any guidance from your office would certainly be appreciated. If this project might be eligible for support under one of your programs, please send me an application and any additional information which you feel might be helpful.

Any information or suggestions that you might have concerning additional funding sources that would be appropriate for this proposal would also be appreciated.

Thank you for your assistance.

Sincerely,

Your Name

Title

APPENDIX B

Sample Application Form

Your Address

Date

Name

Organization

Address

Dear _____:

I am currently developing a program (or project) that would
(description of project).

Please send me a formal application and any additional information or material that would be of assistance in applying for funding.

Thank you very much for your help.

Sincerely,

Your Name

Title

APPENDIX CList of Federal Depository LibrariesAmherst

Amherst College
University of Massachusetts, Godell Library

Belmont

Belmont Memorial Library

Boston

Boston Athenaeum Library
Boston College, Bapst Library
Boston Public Library-REGIONAL
Northeastern University, Dodge Library
State Library of Massachusetts

Brookline

Public Library of Brookline

Cambridge

Harvard College Library
Massachusetts Institute of Technology Libraries

Chicopee

Our Lady of the Elms College Library

Lowell

Lowell Technological Institute, Alumni Memorial Library

Lynn

Lynn Public Library

Marlborough

Marlborough Public Library

Medford

Tufts University Library

Milton

Curry College Library

New Bedford

New Bedford Free Public Library

North Dartmouth

Southeastern Massachusetts University Library

North Easton

Stonehill College, Cushing-Martin Library

Springfield

Springfield City Library

Waltham

Brandeis University, Goldfarb Library

Wellesley

Wellesley College Library

Wenham

Gordon College, Winn Library

Williamstown

Williams College Library

Worcester

American Antiquarian Society Library

University of Massachusetts, Medical Center Library

Worcester Public Library

BIBLIOGRAPHY

A. MAJOR PUBLICATIONS OF THE MASSACHUSETTS SOLAR ACTION OFFICE

A List of Massachusetts Solar Industries

This list contains information on solar companies located or operating in Massachusetts. The list is divided into six major categories:

- 1) Manufacturers,
- 2) Installers,
- 3) Architects and Engineers,
- 4) Builders,
- 5) Researchers, and
- 6) Dealers, Distributors and Manufacturers' Representatives.

Here Comes the Sun

This general handbook, for Massachusetts residents wanting to learn more about solar energy, provides information on various passive and active applications and their economic feasibility, as well as addressing the problems most often encountered by consumers when purchasing solar equipment.

Major Massachusetts Solar Installations

The first of a series of solar installation inventories being published by the Solar Action Office, this list includes commercial, industrial, institutional, agricultural, and large residential solar systems. Updates will be published periodically. Volume I, on active systems, was published in August 1978.

Solar Water Heater Installation Guidelines

A manual for both homeowners and professionals, these guidelines are intended for anyone who wants to avoid common errors associated with the installation of solar domestic hot water heaters.

B. GENERAL INFORMATION PUBLICATIONS ON FUNDING SOURCES AND GRANT PROPOSALS

Developing Skills in Proposal Writing, Mary Hall. Continuing Education Publications, Waldo 100, Corvallis, OR 97331.

The Encyclopedia of U.S. Government Benefits, Roy D. Grisham, Jr. and Paul D. McConaughty (ed.), Avon Books, New York, NY, 1975 (2d edition).

The Federal Granting System: A Guide for Local Governments in Massachusetts, Cooperative Extension Service, Bulletin Center, Cottage A, Thatcher Way, University of Massachusetts, Amherst, MA 01003.

Introduction to the Commerce Business Daily, Donald Levitan and Daniel F. Donahue. Government Research Publications, Box 122, Newton Centre, MA 02139.

Marketing for Non-Profit Organizations, Philip Kotler, Prentice-Hall, NJ, 1975.

C. GENERAL PUBLICATIONS ON SOLAR ENERGY

Direct Use of the Sun's Energy, F. Daniels, Ballantine Books, Inc., New York, NY 10022, 1973. This book covers all aspects of solar research and application and provides an excellent general introduction to solar energy. It costs \$1.95.

Solar Energy Information Locator, Solar Energy Research Institute, 1536 Cole Boulevard, Golden, CO 80401. An up-to-date guide to sources of solar information; available free of charge.

Designing and Building a Solar House, D. Watson, Garden Way Publishing, Charlotte, VT 05445, 1977. This practical book includes information on all aspects of solar house design. The cost is \$8.95.

Solar Home Book, B. Anderson and M. Riordan, Cheshire Books, Harrisville, NH 03450, 1976. This book covers various aspects of solar home heating, retrofitting, and do-it-yourself systems. It costs \$7.50.

Buying Solar, Federal Energy Administration, Stock No. 041-018-00120-4, Government Printing Office, June 1976. This guide offers information on the factors homeowners should consider when buying solar systems. The cost is \$1.85.

